$$\frac{e_1}{1} = \frac{6}{13} v_{in},$$

making the total current through the voltage source (flowing out of it)

$$\frac{11}{13} v_{in}.$$

.

Thus, the equivalent resistance is

$$\frac{13}{11} \Omega.$$

Solution to Exercise 3.15.2

Not necessarily, especially if we desire individual knobs for adjusting the gain and the cutoff frequency.

Solution to Exercise 3.19.1

The ratio between adjacent values is about

$$\sqrt{2}.$$